

LISTING OF CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Canceled)
2. (Canceled)
3. (Previously Presented) The surgical operation apparatus according to claim 27, wherein the surgical instrument includes a probe that transmits the energy from the energy release unit to a biomedical tissue of a body to be operated.
4. (Previously Presented) The surgical operation apparatus according to claim 27, further comprising a latch that fixes the first connector on the second connector.
5. (Previously Presented) The surgical operation apparatus according to claim 27, further comprising:
 - a first magnetism generation unit that is provided in the first connector and that generates a first magnetism; and
 - a second magnetism generation unit that is provided in the second connector and that generates a second magnetism that attracts the first magnetism.
6. (Canceled)
7. (Canceled)

8. (Previously Presented) The surgical operation apparatus according to claim 27, wherein the surgical instrument includes an ultrasonic vibrator that generates an ultrasonic vibration according to the energy received by the energy receiving unit; and an ultrasonic vibration treatment unit that is vibrated by the ultrasonic vibration.

9. (Previously Presented) The surgical operation apparatus according to claim 27, wherein the surgical instrument includes a treatment current generation unit that generates a high-frequency current for treatment according to the energy received by the energy receiving unit; and a treatment electrode through which the current flows, the treatment electrode performing a high-frequency treatment on a body to be operated based on the current.

10. (Previously Presented) The surgical operation apparatus according to claim 27, wherein the drive device generates a first energy that is an electric energy as the energy, the energy release unit is disposed inside the first connector, converts the first energy transmitted by the electric transmission cable into a second energy, and releases the second energy out of the first connector, the energy receiving unit is disposed inside the second connector, receives the second energy, and converts the second energy into an electric energy, and the operation functioning unit is provided on the surgical instrument and functions based on the electric energy converted by the energy receiving unit.

11. (Previously Presented) The surgical operation apparatus according to claim 27, wherein the surgical instrument is one of a laser scalpel, a microwave scalpel, a thermal scalpel, and an electric drill.

12. (Previously Presented) The surgical operation apparatus according to claim 27, further comprising:

a remote operation unit that performs a remote operation; and

a surgical operation manipulator that includes an arm that moves the surgical instrument to operate a body with the surgical instrument according to a command from the remote operation unit, wherein

the energy transmission cable is disposed on the surgical operation manipulator, and the first connector is disposed inside the arm.

13. (Original) The surgical operation apparatus according to claim 12, wherein the surgical instrument includes a probe that transmits the energy from the energy release unit to a biomedical tissue of a body to be operated.

14. (Original) The surgical operation apparatus according to claim 12, further comprising:

a first magnetism generation unit that is provided in the first connector and that generates a first magnetism;

a second magnetism generation unit that is provided in the second connector and that generates a second magnetism that attracts the first magnetism; and

a magnetism generation control unit that controls the first magnetism generated in the first magnetism generation unit and the second magnetism generated in the second magnetism generation unit.

15. (Canceled)

16. (Canceled)

17. (Original) The surgical operation apparatus according to claim 12, wherein the surgical instrument includes an ultrasonic vibrator that generates an ultrasonic vibration according to the energy received by the energy receiving unit; and an ultrasonic vibration treatment unit that is vibrated by the ultrasonic vibration.

18. (Original) The surgical operation apparatus according to claim 12, wherein the surgical instrument includes a treatment current generation unit that generates a high-frequency current for treatment according to the energy received by the energy receiving unit; and a treatment electrode through which the current flows, the treatment electrode performing a high-frequency treatment on a body to be operated based on the current.

19. (Original) The surgical operation apparatus according to claim 12, wherein the drive device generates a first energy that is an electric energy as the energy, the energy release unit is disposed inside the first connector, converts the first energy transmitted by the electric transmission cable into a second energy, and releases the second energy out of the first connector, the energy receiving unit is disposed inside the second connector, receives the second energy, and converts the second energy into an electric energy, and the operation functioning unit is provided on the surgical instrument and functions based on the electric energy converted by the energy receiving unit.

20. (Original) The surgical operation apparatus according to claim 12, wherein the surgical instrument is one of a laser scalpel, a microwave scalpel, a thermal scalpel, and an electric drill.

21. (Currently Amended) A method of controlling a surgical operation apparatus that includes a first connector that releases energy generated by a drive device, a second connector that receives the energy without mechanical contact, and a surgical instrument provided on the second connector, the method comprising:

reading information of the surgical instrument from an identification information storage unit provided in the second connector by using a first information exchange functioning unit provided in the first connector; and

setting a drive state of the drive device based on the information;

accepting a command for generation of energy by the drive device ~~stopping reading of information by the first information exchange functioning unit after the drive state of the drive device is set; and~~

disabling generation of ~~generating~~ the energy in the drive device regardless of the command for generation of energy until the setting completes ~~based on the drive state after reading of information by the first information exchange functioning unit is stopped.~~

22. (Original) The method according to claim 21, further comprising detecting interconnection between the first connector and the second connector.

23. (Canceled)

24. (Previously Presented) The method according to claim 21, further comprising:

detecting drive information of the drive device;

transmitting the drive information through the first information exchange functioning unit;

receiving the drive information transmitted, by a second information exchange functioning unit provided in the second connector; and

storing the drive information received in the identification information storage unit.

25. (Original) The method according to claim 21, wherein the surgical instrument is selected from a plurality of surgical instruments.

26. (Original) The method according to claim 21, wherein the surgical instrument is one of a laser scalpel, a microwave scalpel, a thermal scalpel, and an electric drill.

27. (Currently Amended) A surgical operation apparatus comprising:

a drive device that generates an energy for surgical treatment, the drive device including a first connector to transmit the generated energy;

a surgical instrument that includes an operation functioning unit which functions based on the energy generated by the drive device, the surgical instrument including a second connector which is detachable from the first connector;

a switch which provides a command for generation of energy by the drive device according to a manipulation;

an energy release unit that is disposed inside the first connector and releases the energy generated by the drive device out of the first connector;

an energy receiving unit that is disposed inside the second connector and which receives the energy released from the energy unit without mechanical contact with the energy release unit;

an identification information storage unit that stores identification information of the surgical instrument;

an information exchange unit that reads out information stored in the identification information storage unit according to a connection between the first connector and the second connector; and

a control unit that ~~controls generation of the energy by the drive device, the control unit changing~~ changes a setting for the generation by the drive device based on the information read out by the information exchange unit, and disable the generation of the energy in the drive device regardless of the command for the generation of energy until the information exchange unit completes reading out the information ~~after the information exchange unit completes reading out the information, based on the read-out information, and validating the command from the switch on the generation of the energy by the drive device.~~

28. (Previously Presented) The surgical operation apparatus according to claim 27, wherein the identification information storage unit is disposed inside the second connector, and the information exchange unit further comprises:

a first information exchange functioning unit that outputs a signal for one of reading and storing of information in the identification information unit, the first information exchange functioning unit being disposed inside the first connector; and

a second information exchange functioning unit that either stores the information in the identification information storage unit or reads the information from the identification information storage unit, according to the signal output from the first information exchange functioning unit, the second information exchange functioning unit being disposed inside the second connector.

29. (Previously Presented) The surgical operation apparatus according to claim 27, wherein the control unit controls generation of the energy with a drive parameter depending on characteristics of the surgical instrument based on the identification information read by the information exchange unit.

30. (Previously Presented) The surgical operation apparatus according to claim 12, wherein the identification information storage unit is disposed inside the second connector, and the information exchange unit further comprises:

a first information exchange functioning unit that outputs a signal for one of reading and storing of information in the identification information storage unit, the first information exchange functioning unit being disposed inside the first connector and that; and

a second information exchange functioning unit that either stores the information in the identification information storage unit or reads the information from the identification information storage unit, according to the signal output from the first information exchange functioning unit, the second information exchange functioning unit being disposed inside the second connector.

31. (Previously Presented) The surgical operation apparatus according to claim 12, wherein the control unit controls generation of the energy with a drive parameter depending on characteristics of the surgical instrument based on the identification information read by the information exchange unit.

32. (Previously Presented) The surgical operation apparatus according to claim 27, wherein the control unit controls so that information about a condition of use of the surgical instrument is stored in the identification information storage unit via the information exchange unit according to the manipulation of the switch.